

Two New Species of the Ant Genus *Myrmecina*
(Insecta ; Hymenoptera ; Formicidae)
from Japan and Taiwan

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日本および台湾産カドフシアリ属の2新種

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Synopsis

Two new species of the ant genus *Myrmecina*, *M. flava* n. sp. from Japan and *M. taiwana* n. sp. from Taiwan, are described and illustrated based on the worker and female. Those two new species and *M. punctata* EMERY from New Guinea are distinguishable from the other Oriental and Indo-Australian congeners by the yellowish colored body. Furthermore those new species are distinguished from *M. punctata* by their shagreened head and pro-mesonotum.

The genus *Myrmecina* CURTIS of the subfamily Myrmicinae is characterized by 12-segmented antennae and barrel-shaped petioles, and about 25 forms are known.

In the present paper, I describe two new species, *M. flava* n. sp. from Japan and *M. taiwana* n. sp. from Taiwan, based on the worker and female.

Myrmecina flava n. sp.

(Figs. 1-5)

Holotype worker. Head length (HL) 0.53 mm ; head width (HW) 0.55 mm ; scape length (SL) 0.50 mm ; cephalic index (CI : $HW \times 100 / HL$) 104 ; scape index (SI : $SL \times 100 / HW$) 91 ; WEBER's length of alitrunk (WL) 0.73 mm ; alitrunk width (AW) 0.38 mm ; petiole length (PL) 0.19 mm ; petiole height (PH) 0.19 mm ; dorsal petiole width (DPW) 0.15 mm ; postpetiole

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height (PPH) 0.19 mm ; dorsal postpetiole width (PPW) 0.19 mm ; total length (TL) ca. 2.2 mm.

Head as long as wide, with convex sides and concave occipital border. Eyes small, consist of 10-12 indistinct facets ; approximately 0.05 mm in maximum diameter ; situated laterally about 0.64 x the distance from occipital corner to anterior cephalic corner. Anterior border of clypeus slightly concave ; without median clypeal denticle. Mandibles subtriangular with 8-9 teeth. Antennal scapes not reaching occipital border ; ratio of length of each antennal segment from 8th to 12th, 4 : 5 : 10 : 10 : 34 ; terminal segment 2.7 x as long as broad.

Lateral shape of body as in Fig. 1. Pro-mesonotum slightly convex ; anterior most of propodeum dipping ; teeth of antero-lateral corners of propodeum small, right-angled triangular ; propodeal spines triangular, slightly longer than broad.

Frontal surface of head with 16-17 longitudinal and rather inconspicuous rugae. Truncal dorsum with 11-13 longitudinal rugae ; lateral face of pronotum with 3-5 very inconspicuous rugae. Head, antennal scapes, alitrunk, petiole, and postpetiole shagreened. Mandibles, clypeus, and gaster smooth and shining.

Hairs abundant ; the longest on head 0.05 mm in length, pro-mesonotum 0.13 mm in length, petiole 0.15 mm in length, postpetiole 0.10 mm in length, 1st gasteric tergite 0.08 mm in length.

Color brownish yellow, gaster more brownish.

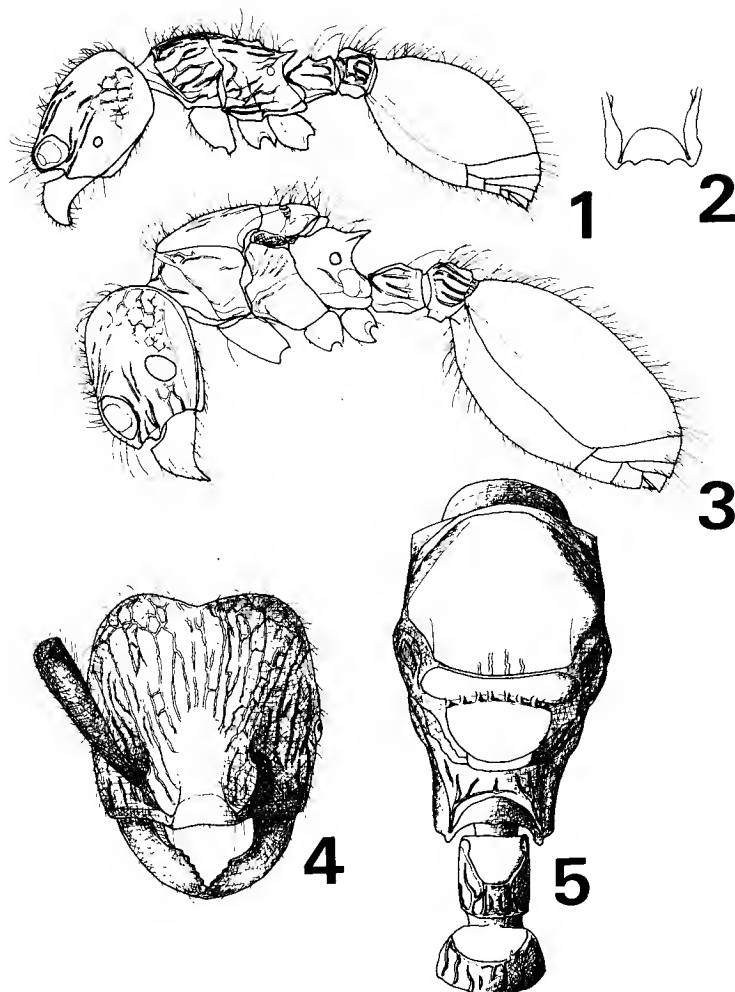
Paratype workers. 5 paratype workers from the same series as holotype with following dimensions and indices : HL 0.53-0.54 mm ; HW 0.54-0.56 mm ; SL 0.50-0.53 mm ; CI 100-103 ; SI 91-96 ; WL 0.70-0.75 mm ; AW 0.38-0.40 mm ; PL 0.18-0.19 mm ; PH 0.19-0.20 mm ; DPW 0.15-0.18 mm ; PPH 0.19-0.20 mm ; PPW 0.20-0.21 mm ; TL ca. 2.2-2.4 mm.

Paratype females. HL 0.54 mm ; HW 0.51 mm ; SL 0.48-0.50 mm ; CI 94 ; SI 94-98 ; WL 0.85-0.88 mm ; AW 0.53-0.58 mm ; PL 0.18-0.20 mm ; PH 0.20 mm ; DPW 0.18-0.20 mm ; PPH 0.24 mm ; PPW 0.25 mm ; TL ca. 2.7 mm. (two individuals were measured.)

Head square ; compound eyes 0.13 mm in maximum diameter. Lateral shape of body as in Fig. 3 ; dorsal view of alitrunk as in Fig. 5.

Frontal surface of head with 14-16 longitudinal rugae ; posterior face of mesoscutum with 4-5 minute striae. Head, antennal scapes, lateral face of alitrunk, petiole, postpetiole shagreened. Mandibles, clypeus, dorsal face of mesoscutum, axilla, scutellum, gaster smooth and shining. Color as in worker's.

Holotype : Worker, 21. VI. 1981, Kakio, Tama-ku, Kawasaki City, Kanagawa Pref., Japan, S. KUBOTA leg.



Figs. 1-5. *Myrmecina flava* n. sp. 1, worker, lateral view ; 2, worker, propodeal spines, above view ; 3, female, lateral view ; 4, worker, head, full face view ; 5, female, alitrunk, petiole, postpetiole, above view.

Paratypes : 2 females, 18 workers (from the same nest as holotype) ; 1 female, 10 workers, 27. IV. 1980, Manazuru-machi, Ashigara-shimo-gun, Kanagawa Pref., Japan, S. KUBOTA leg.; 1 female, 3 workers, 27. IV. 1983, Manazuru-machi, Ashigara-shimo-gun, Kanagawa Pref., Japan, H. KUBOTA leg.; 3 females, 6 workers, 21. V. 1983, Manazuru-machi, Ashigara-shimo-gun, Kanagawa Pref.; Japan, H. KUBOTA leg.

Type depository. Holotype deposited in the National Institute of Agro-Environment Sciences (NIAES), and paratypes in NIAES, Osaka Museum of Natural History (OMNH), and my collection.

Remarks. Colonies were collected in the soil about 5-25 cm in depth of moist forests.

Myrmecina taiwana n. sp.

(Figs. 6-10)

Holotype worker. HL 0.63 mm ; HW 0.63 mm ; SL 0.53 mm ; CI 100 ; SI 84 ; WL 0.85 mm ; AW 0.48 mm ; PL 0.23 mm ; PH 0.24 mm ; DPW 0.20 mm ; PPH 0.24 mm ; PPW 0.25 mm ; TL ca. 2.5 mm.

Head square, with slightly convex sides and concave occipital border. Eyes small, consist of 7-8 facets, approximately 0.04 mm in maximum diameter ; situated laterally about 0.59 x the distance from occipital corner to anterior cephalic corner. Anterior border of clypeus rather straight ; median clypeal denticle lacking. Antennal scapes reaching occipital border ; ratio of length of each antennal segment from 8th to 12th, 3 : 4 : 7 : 8 : 20 ; terminal segment 1.9 x as long as broad.

Alitrunk as in Fig. 6 ; teeth of antero-lateral corners of propodeum triangular, tip rounded ; propodeal spines long, turned upward apically.

Head, antennal scapes, alitrunk, petiole, postpetiole shagreened. Mandibles, clypeus, gaster smooth and shining.

Frontal surface of head with 13-15 longitudinal rugae ; truncal dorsum with 8-10 longitudinal rugae, more straight in central 1-3 ; lateral face of pronotum with 5-6 very inconspicuous rugae.

Hairs abundant ; the longest on head 0.05 mm in length, pro-mesonotum 0.13 mm in length, petiole 0.15 mm in length, postpetiole 0.13 mm in length, 1st gasteric tergite 0.08 mm in length.

Color yellow somewhat brownish, gaster yellowish brown.

Paratype workers. 5 paratype workers from the same series as holotype with following dimensions and indices : HL 0.63-0.65 mm ; HW 0.63-0.65 mm ; SL 0.53-0.55 mm ; CI 100 ; SI 84-85 ; WL 0.88-0.90 mm ; AW 0.48-0.49 mm ; PL 0.23 mm ; PH 0.24-0.25 mm ; DPW 0.20-0.21 mm ; PPH 0.24-0.25 mm ; PPW 0.24-0.25 mm ; TL ca. 2.4-2.7 mm.

Paratype female. HL 0.98 mm ; HW 0.98 mm ; SL 0.65 mm ; CI 100 ; SI 66 ; WL 1.18 mm ; AW 0.75 mm ; PL 0.25 mm ; PH 0.28 mm ; DPW 0.23 mm ; PPH 0.28 mm ; PPW 0.30 mm ; TL ca. 3.2 mm.

Head square ; compound eyes 0.13 mm in maximum diameter. Shape of body in lateral view as in Fig. 8 ; dorsal view of alitrunk as in Fig. 10.

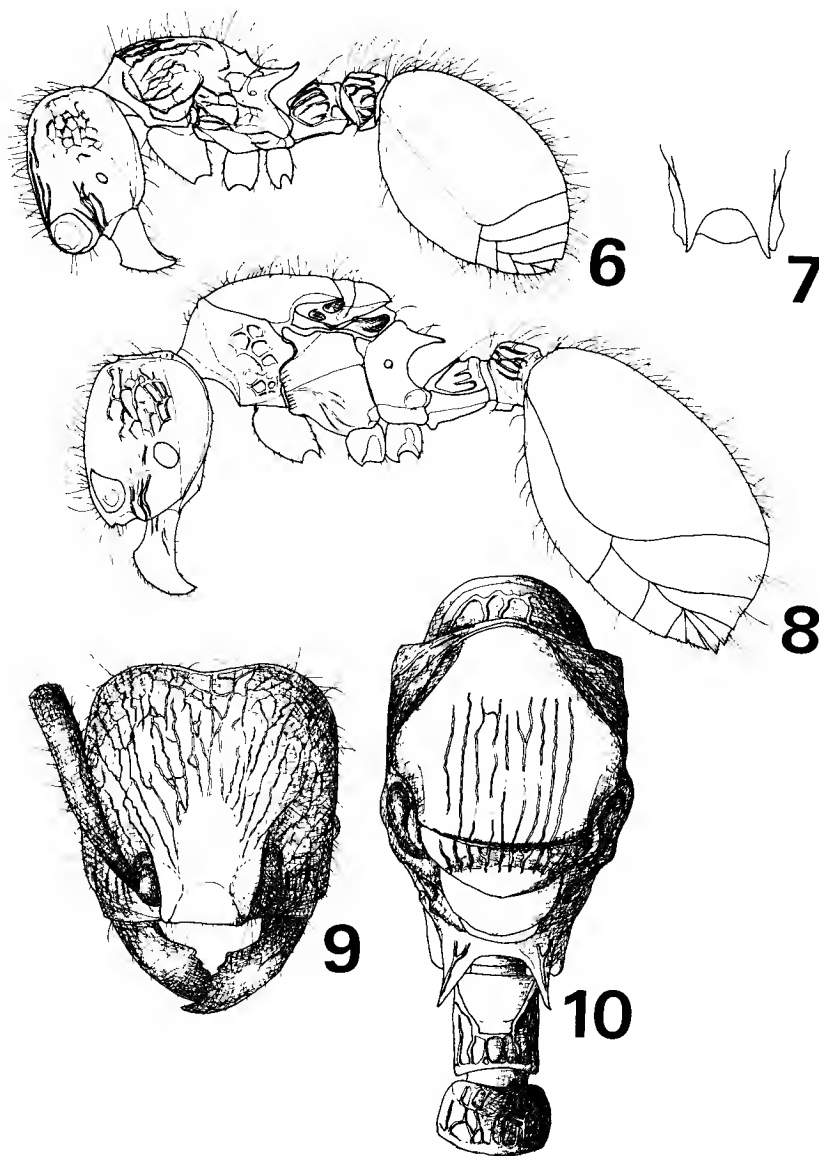
Head, antennal scapes, alitrunk, petiole, postpetiole shagreened. Mandibles, clypeus,

gaster smooth and shining. Rugae of head as in worker's, but more distinct. Dorsal face of mesoscutum shagreened with 8-10 weak striae on the posterior 2/3. Color as in worker's.

Holotype. Worker, 11. VII. 1982, Meichih, Ren'ai Xiang, Nantou Pref., Taiwan, M. TERAYAMA leg.

Paratypes. 3 alate females, 21 workers (from the same nest as holotype).

Type depository. Holotype deposited in NIAES, and peratypes in Taiwan Agricultural



Figs. 6-10. *Myrmecina taiwana* n. sp. 6, worker, lateral view ; 7, worker, propodeal spines, above view ; 8, female, lateral view ; 9, worker, head, full face view ; 10, female, alitrunk, petiole, postpetiole, above view.

Research Institute, NIAES, OMNH, and my collection.

Remarks. The holotype nest series taken from a colony nesting in the soil about 10 cm in depth of the evergreen forest.

Taxonomic notes. Judging from the original descriptions, those two new species and *M. punctata* EMERY described from New Guinea are easily distinguishable from the other Oriental and Indo-Australian congeners by the yellowish colored body. This is rather strong contrast to the uniformly black to dark brownish color seen in the other forms. *M. punctata* is distinguished from the present two new species by the punctured head and pro-mesonotum.

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摘 要

キイロカドフシアリ *Myrmecina flava* n. sp., タイワンキイロカドフシアリ *Myrmecina taiwana* n. sp.を、日本および台湾からそれぞれ記載した。*M. flava* は黄～黄褐色の体色、直径0.05mmで10～12個の個眼からなる複眼、鋭角三角形の前伸腹節刺により、*M. taiwana* は黄～黄褐色の体色、直径0.04mmで7～8個の個眼からなる複眼、細長くかつ先端が上方を向いている前伸腹節刺により、ハタラキアリにおいてそれぞれ同属の他種から区別される。

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